

WHAT IS CLAIMED IS:

1. A sensor device for measuring changes in
nature of a detecting portion upon coupling with a
5 target, characterized in extracting plural pieces of
information including information about the
presence/absence, distribution, and so on, of the
target by using spatial structure of the detecting
portion.

10 2. The sensor device according to claim 1
wherein the spatial structure is a geometrical
structure of the detecting portion.

15 3. The sensor device according to claim 1
wherein the detecting portion includes a plurality of
binding sites.

20 4. The sensor device according to claim 1
wherein the detecting portion includes a plurality of
binding sites permitting a plurality of targets to
selectively couple therewith.

25 5. The sensor device according to claim 4
wherein the binding sites are located in alignment with
sizes of the targets to detect changes in amount of the
targets with time.

6. The sensor device according to claim 1
wherein said information is extracted by measuring
changes in physical nature or structure of the
detecting portion upon coupling with the targets.

7. The sensor device according to claim 1
wherein said information is extracted by measuring
changes in dielectric constant of the detecting portion
upon coupling with the targets.

8. The sensor device according to claim 1
wherein said information is extracted by measuring
changes in dielectric constant of the detecting portion
upon coupling with the targets according to the
principle of surface plasmon resonance.

9. The sensor device according to claim 1
wherein said information is extracted by measuring
changes in weight of the detecting portion upon
coupling with the targets.

10. The sensor device according to claim 1
wherein said information is extracted by measuring
changes in weight of the detecting portion upon
coupling with the targets by using an oscillating
circuit and a frequency measuring device.

11. The sensor device according to claim 3
wherein the targets and the binding sites have the
relation of combination of antigens and antibodies, and
the antigens and the antibodies couple by
antigen/antibody reaction.

12. A sensing method for measuring changes in
nature of a detecting portion upon coupling with a
target, comprising:

extracting a plural pieces of information
including information about the presence/absence,
distribution, and so on, of the target from a spatial
structure of the detecting portion.

13. A biological substance sensor device for
measuring changes in nature of a detecting portion upon
coupling a biological substance, characterized in
simultaneously extracting plural pieces of information
including information about the presence/absence,
distribution, and so on, of the biological substance
from a spatial structure of the detecting portion.

14. A biological substance sensing method for
measuring changes in nature of a detecting portion upon
coupling a biological substance, comprising:

simultaneously extracting plural pieces of

information including information about the presence/absence, distribution, and so on, of the biological substance from a spatial structure of the detecting portion.

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15. A secretion sensor device for measuring changes in nature of a detecting portion upon coupling with a secretion product, characterized in simultaneously extracting plural pieces of information including information about the presence/absence, distribution, and so on, of the secretion product from a spatial structure of the detecting portion.

16. A secretion sensing method for measuring changes in nature of a detecting portion upon coupling with a secretion product, comprising:

simultaneously extracting plural pieces of information including information about the presence/absence, distribution, and so on, of the secretion product from a spatial structure of the detecting portion.

17. An emotion sensor device for detecting changes in emotion through measurement of changes in nature of a detecting portion upon coupling with a secretion product secreted from a living body along with changes of the emotion, characterized in

simultaneously extracting plural pieces of information including information about the presence/absence, distribution, and so on, of the secretion product from a spatial structure of the detecting portion.

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18. An emotion sensing method for detecting changes in emotion through measurement of changes in nature of a detecting portion upon coupling with a secretion product secreted from a living body along with changes of the emotion, comprising:

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simultaneously extracting plural pieces of information including information about the presence/absence, distribution, and so on, of the secretion product from a spatial structure of the detecting portion.

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